

TEAM ID: PNT2022TMID23337

PROJECT NAME: CRUDE OIL PRICE PREDICTION

The screenshot shows the IBM Watson Studio interface in a web browser. The browser's address bar displays the URL: `dataplatfom.cloud.ibm.com/projects/f72f02a8-d245-4db1-a90e-009a09201da3/overview?context=cpdaas`. The page header includes the IBM Watson Studio logo, a search bar, and user information for 'KEERTHANA T S's Account' in 'Dallas'. The main navigation bar shows tabs for 'Overview', 'Assets', 'Jobs', and 'Manage', with 'Overview' currently selected. A 'Sensitive data' badge is visible in the top right of the main content area. The 'Overview' section is divided into three main panels. The left panel, titled 'Assets', lists two datasets named 'Crude_oil_PricePrediction', one created 5 hours ago and another 2 days ago, with a 'View all' link. The middle panel contains a 'Resource usage' section with a progress bar and a 'Readme' section with a text area for project notes. The right panel, titled 'Data in this project', features a dashed box with the text 'Drop data files here or browse for files to upload'. At the bottom, the 'Project history' section shows a single entry: 'You created project Crude oil price prediction'.

Service Details - IBM Cloud x IBM Watson Studio x IBM x IBM-25070-1662611087 x Crude_oil_PricePrediction x +

dataplatfom.cloud.ibm.com/projects/f72f02a8-d245-4db1-a90e-009a09201da3/overview?context=cpdaas

IBM Watson Studio Search in your workspaces Buy ? ? KEERTHANA T S's Account Dallas KT

Projects / Crude oil price prediction

Overview Assets Jobs Manage Sensitive data

Assets

- Crude_oil_PricePrediction 5 hours ago by you
- Crude_oil_PricePrediction 2 days ago by you

[View all](#)

Resource usage

Readme

Type project notes, reminders, or instructions

Data in this project

Drop data files here or browse for files to upload

Project history

- You created project [Crude oil price prediction](#)

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In [64]: #Get the number of rows and columns in the data set
#df.shape

In [65]: import matplotlib.pyplot as plt
#visualize the closing price history
plt.figure(figsize=(17,9))
plt.title('Close Price History')
plt.plot(df['Close'])
plt.xlabel('Date', fontsize=18)
plt.ylabel('Close Price USD (\$)', fontsize=18)
plt.show()



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In [71]: #Build the LSTM model
model = Sequential()
model.add(LSTM(50, return_sequences=True, input_shape=(x_train.shape[1], 1)))
model.add(LSTM(50, return_sequences=False))
model.add(Dense(25))
model.add(Dense(1))

In [72]: #Compile the model
model.compile(optimizer='adam', loss='mean_squared_error')

In [73]: #Train the model
model.fit(x_train, y_train, batch_size=1, epochs=1)
280/280 [=====] - 112s 390ms/step - loss: 0.0042
Out[73]: <keras.callbacks.History at 0x7f50234170d0>

In [74]: #Create the testing data set
#Create a new array containing scaled values from index 1543 to 2003
test_data = scaled_data[training_data_len - 1000:, :]
#Create the data sets x_test and y_test
x_test = []
y_test = dataset[training_data_len:, :]
for i in range(1000, len(test_data)):
x_test.append(test_data[i-1000:i, 0])

In [75]: #Convert the data to a numpy array
x_test = np.array(x_test)

In [76]: #Reverse the data